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EXAMINER

LIANG, GWEN

ART UNIT PAPER NUMBER

2162

DATE MAILED: 06/28/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/821,687

Applicant(s)

TEREK ET AL.

Examiner

GWEN LIANG

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 05 May 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-27 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-27 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 06202005.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

Election/Restrictions

1. Applicant's election of claims 1-13 and 14-27 in the reply filed on 5/5/2005 is acknowledged. Applicant made no response to the restriction characterization, except to state that Applicant's election of claims was not an admission that claims 1-27 represent an embodiment of figure 4. Because applicant did not distinctly and specifically point out the supposed errors in the restriction requirement, the election has been treated as an election without traverse (MPEP § 818.03(a)).

Specification

2. The disclosure is objected to because of the following informalities:

The phrase "simple cannot provide" (page 5, line 6) is an improper use of English language.

The phrase "This is an a typical database system record format" (page 3, section [0012], line 2) is an improper use of English language. The examiner suggests that the phrase be amended to read, "This is a typical database system record format".

The phrase "For example, should be..." (page 4, section [0014], line 3) is an improper use of English language.

Appropriate correction is required to be made to the aforementioned and any other informalities existing in the disclosure.

Claim Rejections - 35 USC § 112

3. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

4. Claims 9, 13, 22 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention.

In dependent claims 9, and 22, the claimed limitation "the at least one type byte indicates that said at least one data member is the only member or members of the data object" is not sufficiently supported by the teaching in the specification. The examiner cannot find support for this limitation in the specification

In dependent claim 13, the claimed limitation "at least one binary tree ("btree") number stored substantially proximally to said at least one data member" is not sufficiently supported by the teaching in the specification. The examiner cannot find support for this limitation in the specification

5. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

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6. Claims 7, 12, 20 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Regarding dependent claims 7 and 20, the claimed subject matter " comprising a primitive data type excluding large objects ("LOBs"), a large object ("LOB") data type, a file stream ("FS") data type, and a collection element data type " renders the claim indefinite because it is unclear as to what data types are excluded from the group. The claim language of "excluding large objects,... a large object..., a file stream... and a collection ..." makes it unclear to the examiner as to whether only "large objects" are excluded or every elements after excluding are excluded.

Regarding claim 12, the claimed subject matter "that is associated with a first data member", in line 2, renders the claim indefinite because it is unclear whether the clause "that is associated with a first data member" is describing "stored bytes" or "one byte" or something else.

Claim Rejections - 35 USC § 101

7. 35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

Claims 1-13, 14-25 and 27 are rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter.

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Regarding independent claim 1, the "data members as claimed are descriptive material *per se* and are not statutory because they are not capable of causing functional change in the computer.

Regarding independent claim 14, the language of the claims raises a question as to whether the claim is directed merely to an abstract idea that is not tied to a technological art, environment or machine which would result in a practical application producing a concrete, useful, and tangible result to form the basis of statutory subject matter under 35 U.S.C. 101.

MPEP 2106 IV.B.2.(b)

A claim that requires one or more acts to be performed defines a process. However, not all processes are statutory under 35 U.S.C. 101. *Schrader*, 22 F.3d at 296, 30 USPQ2d at 1460. To be statutory, a claimed computer-related process must either: (A) result in a physical transformation outside the computer for which a practical application in the technological arts is either disclosed in the specification or would have been known to a skilled artisan, or (B) be limited to a practical application within the technological arts.

Claims 14-25 and 27, in view of the above cited MPEP sections, are not statutory because they merely recite a number of manipulating steps without producing any tangible result and/or being limited to a practical application within the technological arts. The use of a computer has not been indicated.

Furthermore, regarding dependent claim 27, a signal carrying instructions which when executed perform the method of Claim 14, is non-statutory as not being tangibly embodied in a manner so as to be executable and is non-statutory for failing to be in

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one of the categories of invention. This is true even if the method of Claim 14 is a statutory method.

Claim Rejections - 35 USC § 103

8. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

9. Claims 1-10, 14-23, 26, 27 are rejected under 35 U.S.C. 103(a) as being unpatentable over the Applicant's Admission, "Admission", (Application No. 10/821,687), and further in view of Bennion (U.S. Patent No. 5,634,123).

With respect to claim 1, Admission teaches data members comprising:

a plurality of sequentially stored bytes (Specification, page 3, section [0012],

"Another serialization format is in the "Storage Engine record" format, also referred to as the "SE record," or simply "record" format. This is an a typical database system record format"; Figure 10);

at least one data member represented within said plurality of sequentially stored bytes (Specification, page 3, section [0012]; Figure 10), wherein said at least one data member is associated with a data type (Specification, page 2, section [0006]); and

However Admission does not explicitly disclose at least one type byte ... located substantially proximally to the at least one data member.

Bennion discloses at least one type byte within said plurality of sequentially stored bytes that is used to identify the data type of said at least one data member, wherein the at least one type byte is located substantially proximally to the at least one data member (col. 1, lines 59-60, "A code point found at the beginning of each record specifies its type"; col. 5, lines 34-39, "Format 204 is a one-byte field that specifies an attribute type that is used by the application program 106 in interpreting the stored data. Thus, the system provides for automated translation of individual records from one data format to another. Required translation operations may be provided in the code point library").

It would have been obvious to one having ordinary skill in the art at the time the invention was made to incorporate at least one type byte ... located substantially proximally to the at least one data member as disclosed by Bennion into the storage of the data members as disclosed in Admission to provide a system and method of data management permitting storage and communication of different types of data, and allowing hierarchical nesting of data records and variable lengths of records (col. 1 lines 40-44). One of ordinary skill in the art would be motivated to make the aforementioned combination with reasonable expectation of success.

Claim 2 is rejected for the reasons set forth hereinabove for claim 1 and furthermore the combination of Admission and Bennion discloses data members wherein the at least one data member is stored in a record format (Specification, page 3, section [0012]; Figure 10), and wherein the record format defines a predictable

location for said at least one data member in relation to the at least one type byte (Bennion, col. 1, lines 59-63).

Claim 3 is rejected for the reasons set forth hereinabove for claim 1 and furthermore Bennion discloses data members comprising at least one length byte of said plurality of sequentially stored bytes that is used to identify a length of the at least one data member (col. 1, lines 60-61).

Claim 4 is rejected for the reasons set forth hereinabove for claim 1 and furthermore Bennion discloses data members wherein said at least one data member indicates a location for data associated with the data object, and said location is associated with a location type, and at least one location byte of said plurality of sequentially stored bytes is used to identify the location type (col. 4, lines 32-46).

Claim 5 is rejected for the reasons set forth hereinabove for claim 1 and furthermore Bennion discloses data members wherein the at least one type byte is the first byte of the plurality of sequentially stored bytes, and indicates a beginning of the data object (col. 1, lines 59-60).

Claim 6 is rejected for the reasons set forth hereinabove for claim 5 and furthermore Bennion discloses data members wherein the at least one type byte indicates a type of data object (col. 1, lines 59-60).

Claim 7 is rejected for the reasons set forth hereinabove for claim 1 and furthermore Admission discloses data members wherein the data type is selected from

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a group comprising a primitive data type excluding large objects ("LOBs"), a large object ("LOB") data type, a file stream ("FS") data type, and a collection element data type (Specification, page 2, section [0006]).

Claim 8 is rejected on grounds corresponding to the reasons given above for claims 7 and 2.

Claim 9 is rejected for the reasons set forth hereinabove for claim 1 and furthermore Bennion discloses data members wherein the at least one type byte indicates that said at least one data member is the only member or members of the data object (col. 5, lines 34-39).

Claim 10 is rejected for the reasons set forth hereinabove for claim 1 and furthermore Bennion discloses data members comprising at least one collection start byte within said plurality of sequentially stored bytes, wherein the at least one collection start byte is used to indicate the beginning of a series of related data members stored substantially proximally to said at least one collection start byte (col. 2, line 63 – col. 3, line 31; col. 4, lines 32-46; col. 6, lines 26-32).

Claims 14-23 are rejected on grounds corresponding to the reasons given above for claims 1-10.

Claim 26 and 27 are rejected for the reasons set forth hereinabove for claim 14 and furthermore Bennion discloses a computer readable medium and a modulated data signal containing instructions... (col. 2, lines 30-55).

10. Claims 11, 12, 24, 25 are rejected under 35 U.S.C. 103(a) as being unpatentable over the Applicant's Admission, "Admission", (Application No. 10/821,687), further in view of Bennion (U.S. Patent No. 5,634,123), and further in view of Wilcox et al., "Wilcox" (U.S. Patent No. 5,568,639).

Claim 11 is rejected for the reasons set forth hereinabove for claim 1. However the combination of Admission and Bennion does not explicitly disclose data members comprising at least one terminator byte within said plurality of sequentially stored bytes, wherein the at least one terminator byte is used to indicate the end of a series data members.

Wilcox discloses the use of at least one terminator byte within said plurality of sequentially stored bytes, wherein the at least one terminator byte is used to indicate the end of a series data members (col. 5, line 55 – col. 6, line 9).

It would have been obvious to one having ordinary skill in the art at the time the invention was made to incorporate the use of at least one terminator byte ... as disclosed by Wilcox into the storage of the data members as disclosed in the combination of Admission and Bennion to provide a method of defining DATA objects and CONTAINER objects and SYSTEM objects that facilitates navigation through a file structuring system (Abstract). One of ordinary skill in the art would be motivated to make the aforementioned combination with reasonable expectation of success.

Claim 12 is rejected for the reasons set forth hereinabove for claim 1. However the combination of Admission and Bennion does not explicitly disclose data members

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comprising at least one byte ... associated with a first data member ..., wherein said at least one byte provides information about a second data member ...

Wilcox discloses the use of at least one byte within said plurality of sequentially stored bytes that is associated with a first data member that is part of a collection of data members, wherein said at least one byte provides information about a second data member that is part of the collection of data members (col. 6, lines 7-17).

It would have been obvious to one having ordinary skill in the art at the time the invention was made to incorporate the use of at least one byte ... associated with a first data member ..., wherein said at least one byte provides information about a second data member as disclosed by Wilcox into the storage of the data members as disclosed in the combination of Admission and Bennion. Using this scheme, objects of varying size can be included in the file without reserving the space that would be required for fixed-length objects and without overloading the range of directly representable values in order to use a delimiting symbol (col. 6, lines 13-17). One of ordinary skill in the art would be motivated to make the aforementioned combination with reasonable expectation of success.

Claims 24, 25 are rejected on grounds corresponding to the reasons given above for claims 11, 12.

11. Claim 13 is rejected under 35 U.S.C. 103(a) as being unpatentable over the Applicant's Admission, "Admission", (Application No. 10/821,687), further in view of

Bennion (U.S. Patent No. 5,634,123), and further in view of Call et al., "Call" (U.S. Publication No.2002/0143521).

Claim 13 is rejected for the reasons set forth hereinabove for claim 1. However the combination of Admission and Bennion does not explicitly disclose data members comprising at least one binary tree ("btree") number stored substantially proximally to said at least one data member.

Call discloses data members comprising at least one binary tree ("btree") number stored substantially proximally to said at least one data member (pages 6-7, section [0078], Table of Description of "Termstore Private Data and Methods" and "Termstore Public Data and Methods").

It would have been obvious to one having ordinary skill in the art at the time the invention was made to incorporate at least one binary tree ("btree") number ... as disclosed by call into the storage of the data members as disclosed in the combination of Admission and Bennion to store both fixed and variable length data as an addressable array of integer values organized to permit more efficient execution of processing functions of the type typically performed by database management systems (page 2, section [0016]). One of ordinary skill in the art would be motivated to make the aforementioned combination with reasonable expectation of success.


Contact Information

Any inquiry concerning this communication or earlier communications from the examiner should be directed to GWEN LIANG whose telephone number is 571-272-4038. The examiner can normally be reached on 12:00 P.M. - 8:30 P.M. Monday and Thursday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, JOHN BREENE can be reached on 571-272-4107. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

21 June 2005
G.L.


Primary Examiner